

**No. 617,751.**

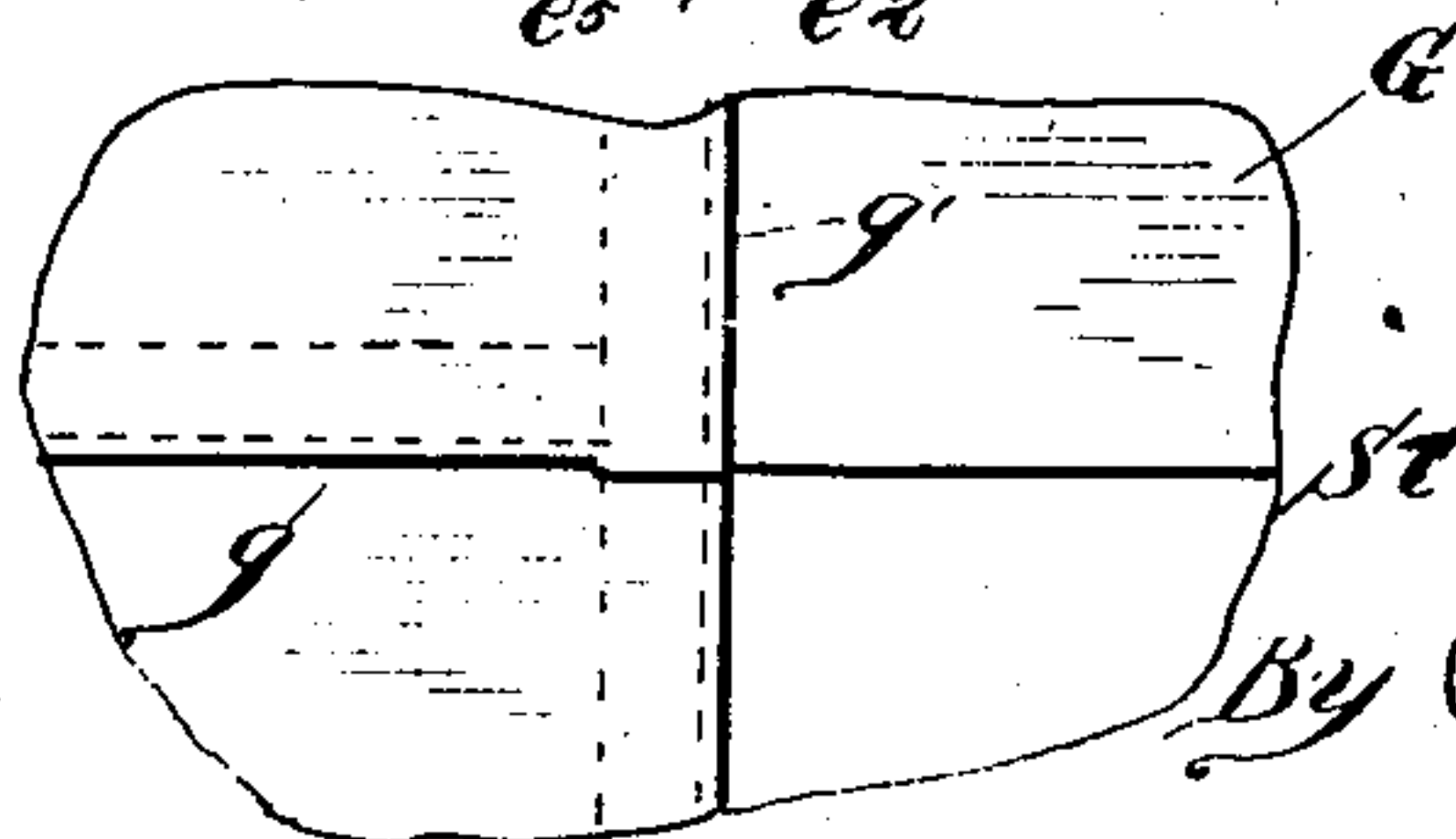
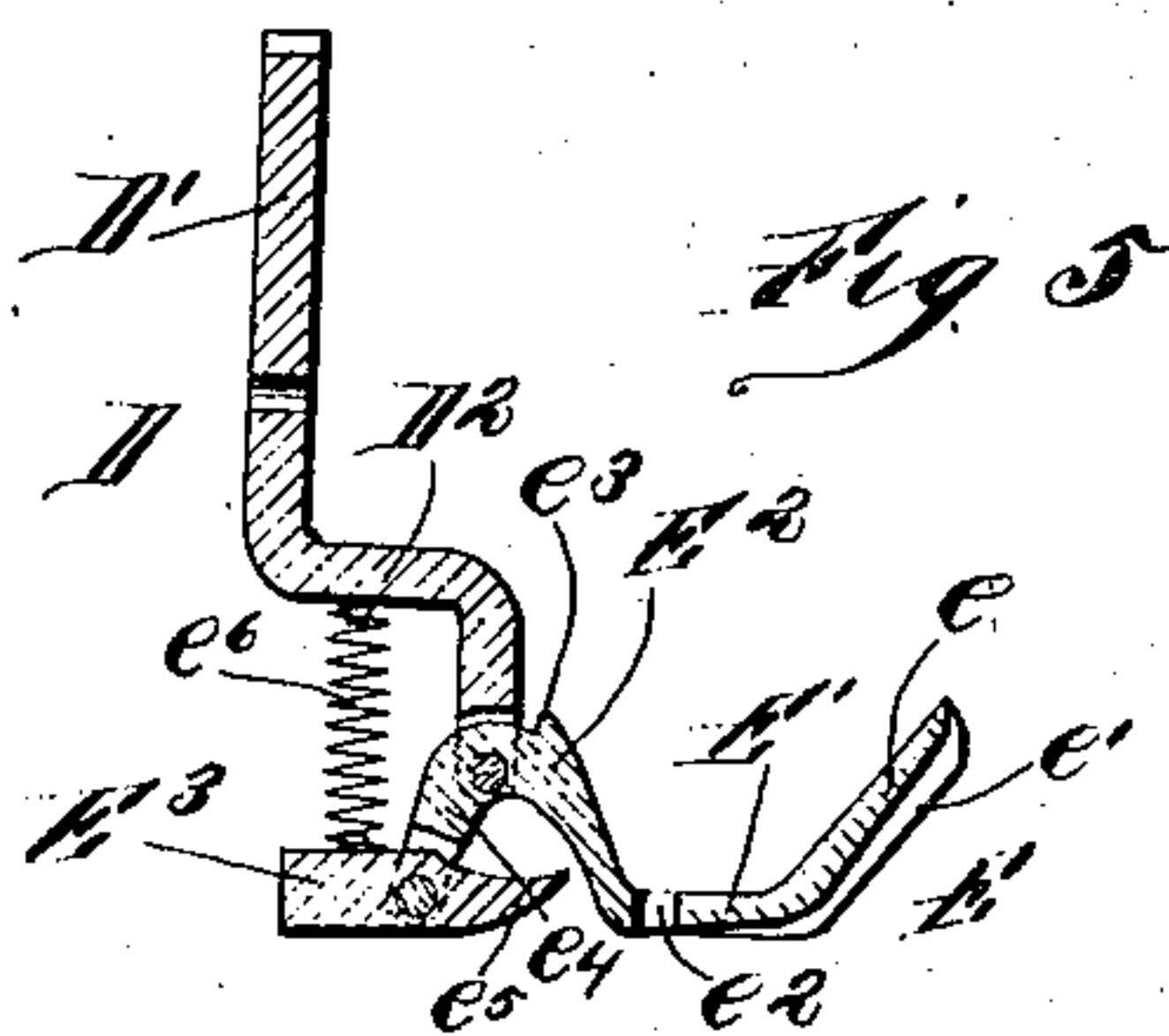
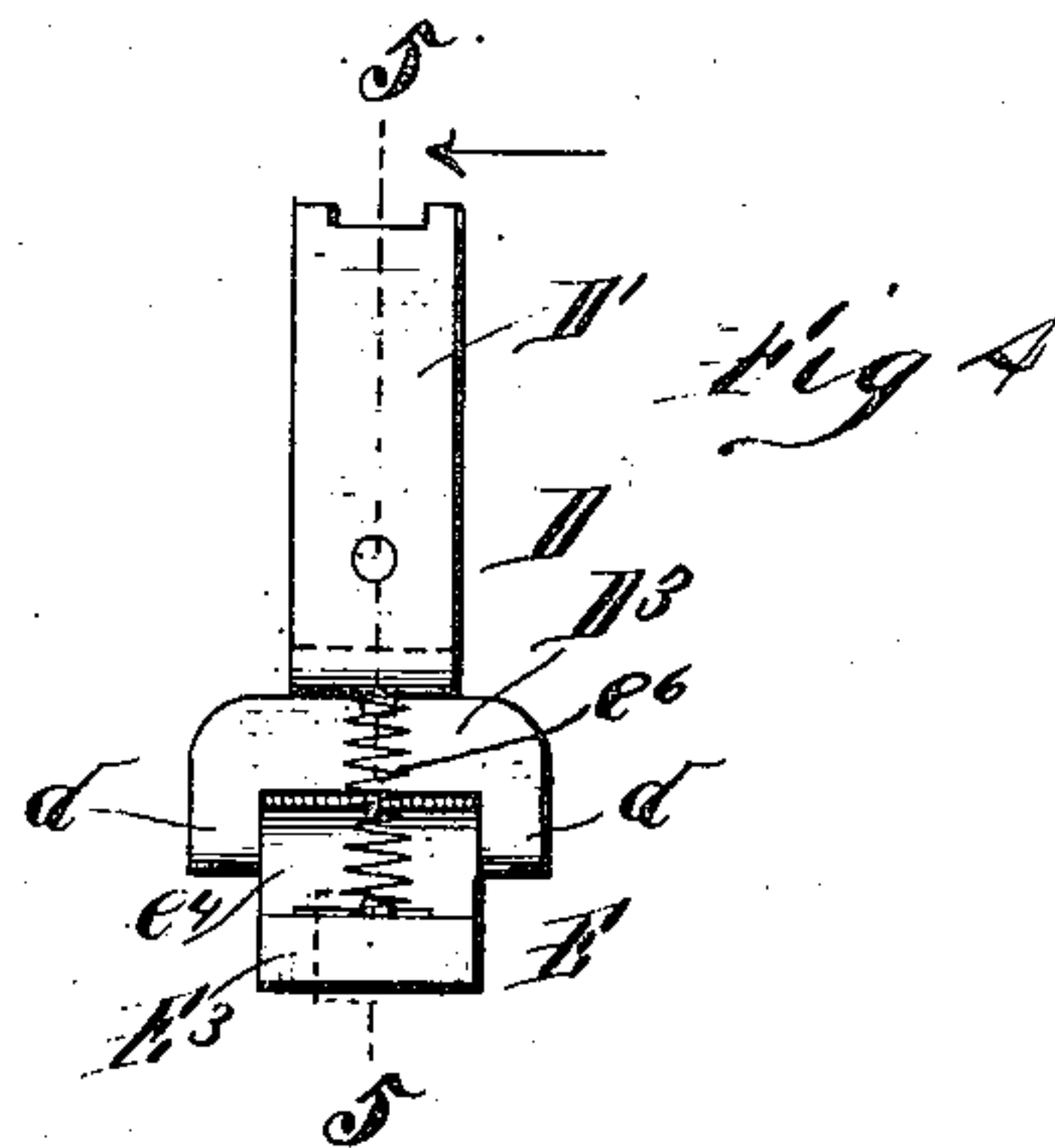
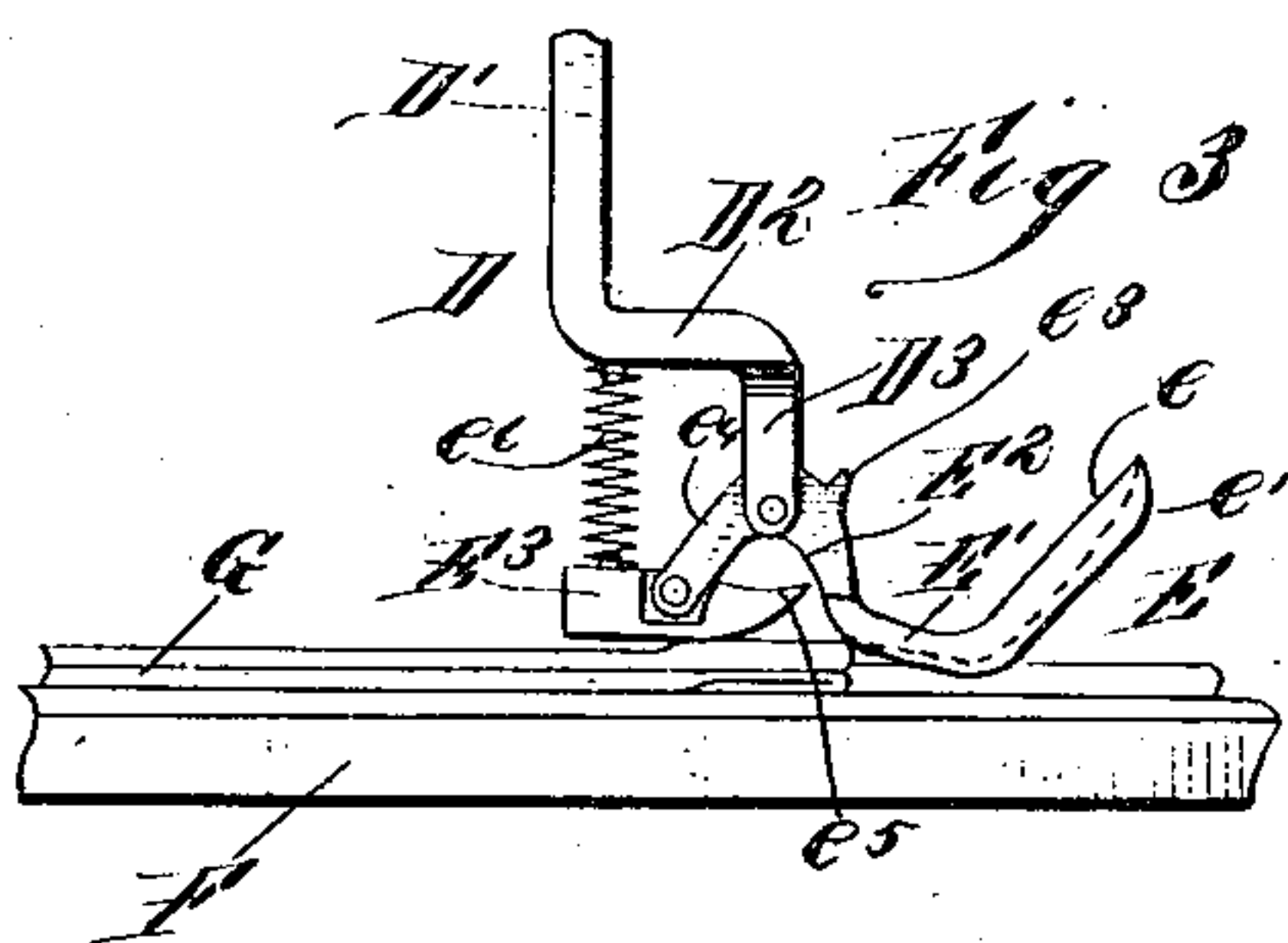
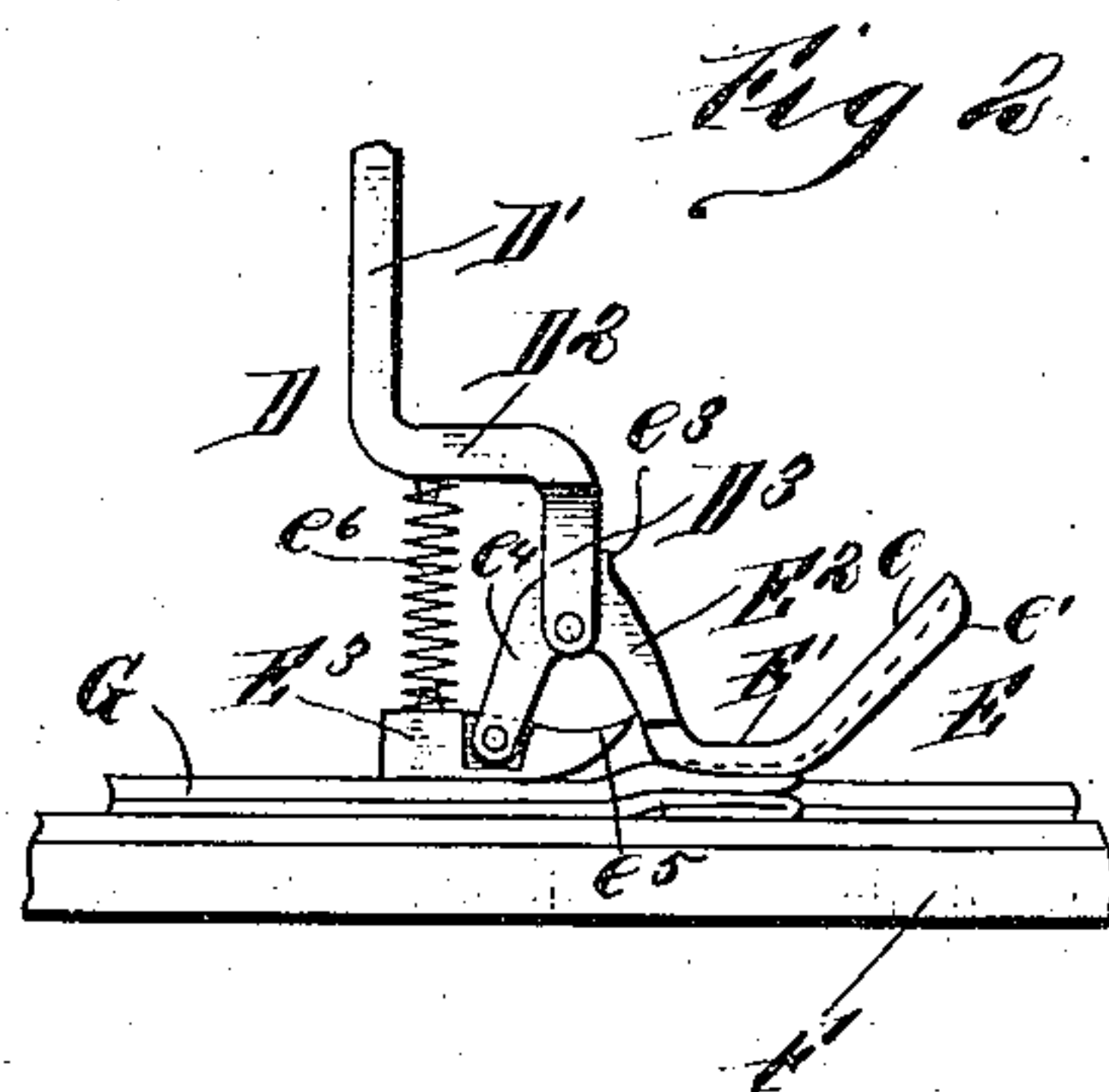
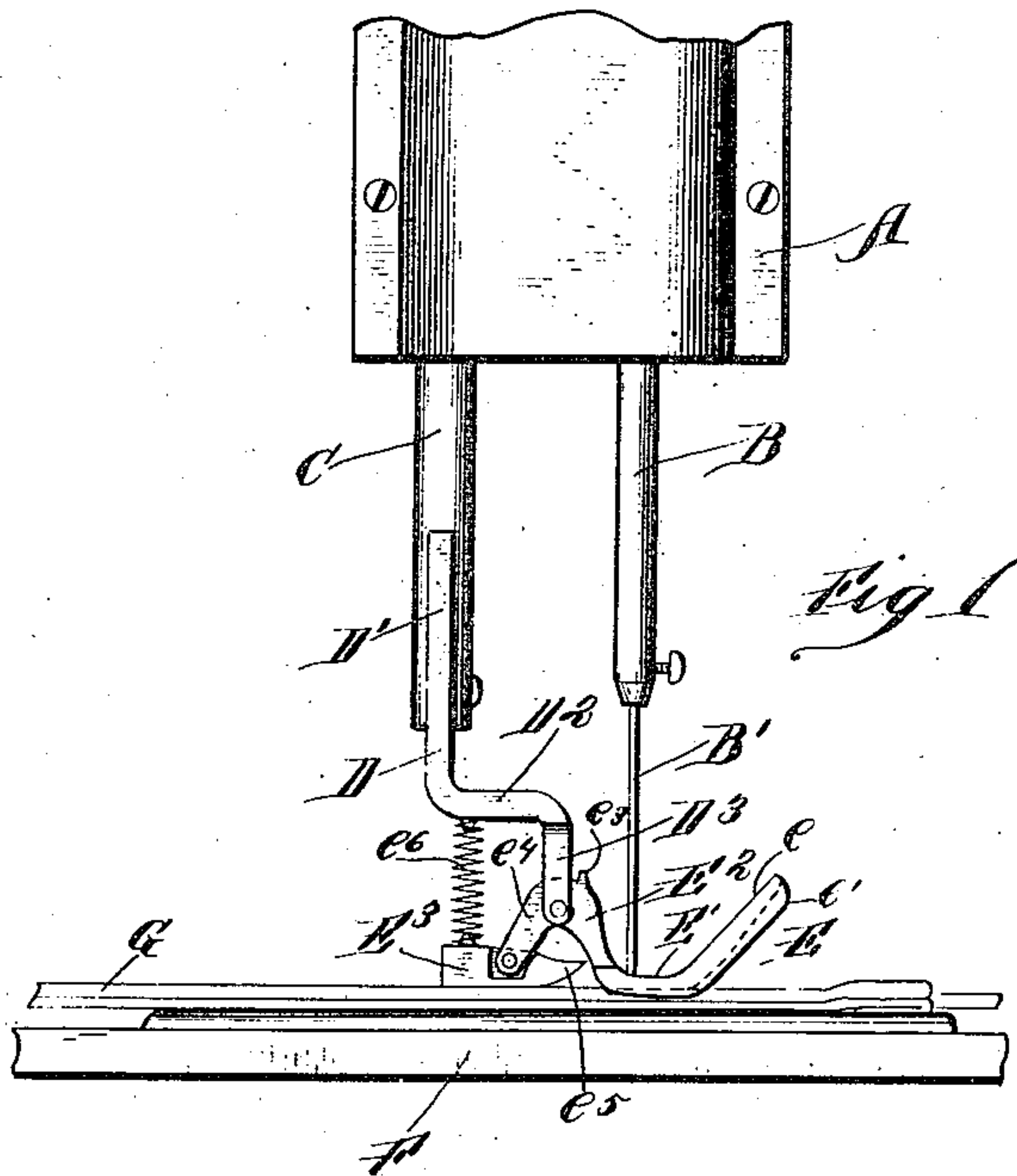
**Patented Jan. 17, 1899.**

**S. LASKEY.**

**PRESSER FOOT FOR SEWING MACHINES.**

(Application filed Mar. 22, 1897.)

(No Model.)



Witnesses

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*There is too*

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# UNITED STATES PATENT OFFICE.

STEPHEN LASKEY, OF CHICAGO, ILLINOIS.

## PRESSER-FOOT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 617,751, dated January 17, 1899.

Application filed March 22, 1897. Serial No. 628,574. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN LASKEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Presser-Foot for Sewing-Machines, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is an elevation of a portion of a sewing-machine embodying my invention, showing the presser-foot before reaching a cross-seam. Fig. 2 is a similar view, omitting some of the parts previously illustrated, 15 showing the presser-foot in its first stage of passing such a cross-seam. Fig. 3 is a view similar to Fig. 2, showing the presser-foot in the second stage of passing such a cross-seam. Fig. 4 is a rear elevation of the presser-foot. Fig. 5 is a vertical longitudinal section 20 on the line 5 5 of Fig. 4 in the direction of the arrow therein. Fig. 6 is a plan view of a portion of the material to be sewed.

My invention relates to presser-feet for 25 sewing-machines, and has for its object to enable such a presser-foot when meeting cross-seams, particularly in the sewing of heavy material, to ride easily and readily over the same and to avoid in so doing the skipping 30 of one or more stitches, which frequently results with the presser-feet constructed as heretofore.

My invention consists in that general construction of a presser-foot hereinafter explained, one specific form of which I have shown in the drawings and shall now more particularly describe.

Referring to the drawings by letter, A represents the depending head of any ordinary 40 construction; B, the needle-bar adapted to reciprocate therein, carrying one or more needles B'. For convenience of illustration I have shown but one needle B' in the drawings. So far as my invention is concerned 45 any number of needles may be employed, and in practice two will actually be used to make the double seams in heavy materials for which my presser-foot is particularly adapted.

The presser-bar C is carried by the head A 50 in the usual manner and in turn carries the shank D. The shank D comprises an upper

upright portion D', secured to the presser-bar C, a short offset horizontal portion D<sup>2</sup>, and a downwardly-extending portion D<sup>3</sup>, greater in width than the two latter and provided on each side with a short arm d. 55

The presser-foot itself, E, actually consists of two parts pivotally connected with one another, but may more conveniently be described as comprising three parts—a toe E', 60 an instep E<sup>2</sup>, and a heel E<sup>3</sup>. The toe E' is turned upward, as at e, and the under surface of the toe is provided with ribs e' along the edges of the under surface thereof, forming a channel between the same adapted to 65 receive the seam that is being sewed. The toe is further provided with one or more perforations e<sup>2</sup>, adapted to receive and corresponding in number to the needles employed.

Upon the upper surface of the arched instep E<sup>2</sup> is formed a lug e<sup>3</sup>, adapted to remain 70 normally out of contact with the adjacent portion D<sup>3</sup> of the shank, but to bear against the same when the toe is elevated. Behind the lug e<sup>3</sup> the instep E<sup>2</sup> is pivotally mounted in 75 the arms d of the shank.

To the rearwardly and downwardly extending portion e<sup>4</sup> of the instep E<sup>2</sup> is pivoted the heel E<sup>3</sup> of the presser-foot, which is preferably provided with an upturned front edge 80 e<sup>5</sup>. In the rear of its pivotal mounting it carries a coiled expanding spring e<sup>6</sup>, which extends upward and bears against the lower surface of the horizontal portion D<sup>2</sup> of the shank D. 85

F represents the working plate of the machine, and G a portion of the material to be sewed, shown as formed with a seam g in the process of being stitched and with a cross-seam g' already sewed. 90

The operation of this presser-foot, the construction of which is hereinabove described, may be now further explained. So long as the presser-foot travels along the seam g of its own sewing it will occupy substantially 95 the position shown in Fig. 1. When the toe first reaches the cross-seam g', it will be slightly tilted up, pivoting upon its mounting in the presser-foot shank, and without materially elevating the shank or presser-bar. 100 This enables the foot easily to obtain a start in surmounting the cross-seam without hav-



ing to lift the presser-bar so to do. As the toe rises and is fully elevated to the height of the cross-seam the lug  $e^3$  bears against the adjacent portion  $B^3$  of the shank. The pivoting of the toe is thereby stopped, and the entire presser-foot, shank, and presser-bar are elevated. This is the stage illustrated in Fig. 2. As the presser-foot continues to traverse the cross-seam, as shown in Fig. 3, the toe leaves the said cross-seam, while the heel bears upon the same. The weight of the presser-bar now comes upon the heel in consequence. As a result the toe is thrust firmly downward upon the seam to be sewed beyond the cross-seam, and is there held so long as the heel of the presser-foot is traversing the cross-seam. The skipping of stitches which frequently results from the elevation of the toe above the seam to be sewed upon the farther side of the cross-seam is thus entirely avoided. The toe is always in close contact with the seam which is being sewed. Moreover, as the material still continues to move past the presser-foot the pivoting of the heel permits it to slide off from the farther side of the cross-seam gradually and without jar, and the presser-foot as a whole regains its normal position with the greatest flexibility and evenness of running. This position of the parts is made normal and the running of the presser-foot more efficient and smooth by the employment of the spring  $e^6$ , as shown and described.

It will be seen that the mode of operation and construction employed in my invention is that of a compound presser-foot in which the toe  $E$  is virtually one foot or leading member, while the elongated heel  $E^3$  is virtually another foot or supplemental member. These feet or supplemental members are tread-surfaces, and the shank is their support.

An essential feature of my invention is the construction whereby the "pivoted heel" or "auxiliary foot," whichever it may be termed, has a long bearing-surface, as shown in the present form, comprising about one-half of the bearing-surface of the entire foot.

Another valuable feature of my construction is found in the fact that the upturned portion  $e^5$ , or "toe," as it may be called, of the supplemental foot is very close to the point at which the needle passes through the foot, as will be seen in Fig. 5. It results from this construction that as soon as the toe meets an obstruction, such as a seam, and rises additional pressure will be thereby put upon the supplemental foot or elongated heel and that said supplemental foot, being pivoted, still maintains its horizontal position and, extending forward to almost the place at which the needle passes through the foot, will hold the material being sewed down very firmly, so as to prevent its rising and the consequent dropping of stitches. As soon as the heel of supplemental foot reaches the obstruction or seam its toe in turn rises, and what may be called its "heel" is pressed down more firmly,

while at the same time the leading member of the foot—that is to say, the toe  $E$ —resumes its normal pressure and position.

It will be readily seen that my compound presser-foot can, by the yielding action of the different parts thereof, pass over an obstruction with much less jar and at the same time hold the cloth down more firmly than is possible in any construction where a compound foot is not employed.

It will be obvious that many changes in the details of construction and particularly in the form of the parts may be made without departing from the spirit of my invention.

What I claim therefore, and desire to secure by Letters Patent, is—

1. A presser-foot for sewing-machines, comprising a support and tread-sections, one in advance of the other and having plane tread-surfaces, and loosely mounted upon the support to oscillate independently of the support and conform to the surfaces on which they bear, substantially as described.

2. In a presser-foot, the combination of the shank, with the compound presser-foot pivotally connected thereto, the members of said compound presser-foot having elongated bearing-surfaces and being pivotally connected to each other, one in advance of the other, substantially as described.

3. In a presser-foot, the combination of the shank, with the leading member of the compound presser-foot pivoted thereto, and the supplemental member pivotally connected to said leading member said members having elongated bearing-surfaces, substantially as described.

4. In a presser-foot, the combination of the shank, with the leading member of the compound presser-foot pivoted thereto, the supplemental member pivotally connected to said leading member said members having elongated bearing-surfaces, and a spring interposed between said shank and said supplemental member, substantially as and for the purpose described.

5. In a presser-foot, a shank, a toe-piece pivotally mounted in said shank, and a heel having an elongated tread-surface sliding over the cloth and pivotally connected to said toe-piece.

6. In a presser-foot, a shank; a toe-piece pivotally mounted in said shank, and provided with a stop to limit its upward movement; and a heel having an elongated tread-surface sliding over the cloth and pivotally connected to said toe-piece.

7. In a presser-foot, the shank  $D$ ; the toe  $E'$  upturned as at  $e$ , and provided with the needle-aperture  $e^2$ ; the instep  $E^2$  integral with the toe  $E'$  and pivoted in the said shank; and the heel  $E^3$  having an elongated tread-surface sliding over the cloth and pivotally mounted in the rear portion of the said instep.

8. In a presser-foot, the shank  $D$ ; the toe  $E'$  upturned as at  $e$ , provided with the needle-aperture  $e^2$ ; the instep  $E^2$  integral with the



toe E', pivoted in the said shank, and provided with a stop  $e^3$ ; and the elongated heel E<sup>3</sup> having an elongated tread-surface sliding over the cloth and pivotally mounted in the rear portion of the said instep.

9. In a presser-foot, the shank D comprising the upright portion D', horizontal portion D<sup>2</sup> and depending portion D<sup>3</sup>; the toe E' upturned as at  $e$ , provided on its under surfaces with the ribs  $e'$ , and perforated as at  $e^2$ ; the instep E<sup>2</sup> pivoted in the part D<sup>3</sup> of the shank, and provided with the lug  $e^3$  adapted to contact therewith as the toe rises; and the heel E<sup>3</sup> pivoted in the rear portion  $e^4$  of the instep.

10. In a presser-foot, the shank D compris-

ing the upright portion D', horizontal portion D<sup>2</sup> and depending portion D<sup>3</sup>; the toe E' upturned as at  $e$ , provided on its under surfaces with the ribs  $e'$ , and perforated as at  $e^2$ ; the instep E<sup>2</sup> pivoted in the part D<sup>3</sup> of the shank, and provided with the lug  $e^3$  adapted to contact therewith as the toe rises; the heel E<sup>3</sup> pivoted in the rear portion  $e^4$  of the instep, upturned as at  $e^5$ ; and a spring adapted to depress the rear of the heel.

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Witnesses:

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